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(19) **United States**(12) **Patent Application Publication****Fujioka**(10) **Pub. No.: US 2009/0056463 A1**(43) **Pub. Date: Mar. 5, 2009**(54) **SEMICONDUCTOR PRESSURE SENSOR AND
METHOD FOR MANUFACTURING
SEMICONDUCTOR PRESSURE SENSOR****Publication Classification**(51) **Int. Cl.****G01L 9/02** (2006.01)**H01L 21/00** (2006.01)(52) **U.S. Cl.** **73/725; 438/53; 257/E21.001**

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ABSTRACT

A semiconductor pressure sensor includes a diaphragm; a resistor provided on a top surface of the diaphragm; an insulating film formed on the diaphragm and the resistor having a penetrating part exposing a top surface of the resistor; and a wiring pattern formed from the top surface of the resistor exposed by the penetrating part to a top surface of the insulating film; wherein a distance between a first crossing part where a plane orthogonal to the top surface of the diaphragm meets a top end of a side plane of the penetrating part and a second crossing part where the plane orthogonal to the top surface of the diaphragm meets a bottom of the side plane of the penetrating part is equal or greater than a thickness of the insulating film by a factor of a square root of two.

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